

REMARKS/ARGUMENTS

Reconsideration of this application in light of the above amendments is courteously solicited.

In response to the Examiner's rejection under 35 U.S.C. 112 raised on Page 2 of the examiner's office action dated July 8, 2003, Applicants have amended Page 14 of the specification. In this regard the Examiner's attention is drawn to Page 15 lines 4-7 of the instant specification as well as the Examples which clearly set forth the inner reference solution. Finally, claims 5 and 14 have been cancelled without prejudice.

In the office action dated July 8, 2003, the examiner rejected previously submitted independent claim 16 under 35 U.S.C. 103 as being unpatentable over Suzuki et al. in view of the '527 patent, the '386 patent, and either the '124 or the '211 patent. As to how this rejection applies to claim 16 as amended herein, it is respectfully traversed. Independent claim 16 has been extensively amended. Independent claim 16 now sets forth the limitation that "the line of micro capillary being formed as a vacancy within the insulating membrane by making the vacancy in forming the insulating membrane". In addition, claim 16 has been amended so as to include the further limitation to the inner reference solution. It is respectfully submitted that independent claim 16, as amended, patentably defines over the previously cited and applied prior art references.

Firstly, with respect to the "line of micro capillary" Applicants assert that Example 4 provides explanation for the "line of micro capillary" and the Examiner has interpreted this phrase correctly, that is, line of micro capillary" means "a straight line channel extending from the electrolyte well to the outer boundary of the electrode". This specific Example is what was referred to in Applicants previous response and, the Examiner's interpretation is correct. In this

regard it should be noted that the reference electrodes disclosed in both the Mauer '124 and the Jones '211 documents are completely different from the reference electrodes claimed in independent claim 16. The limitation to the line of micro capillary added to claim 16 further distinguishes over the cited references. The primary reference to Suzuki, which is directed to a planar reference electrode, discloses a thin film liquid junction as a junction and is different from the junction as the present invention as claimed. It is respectfully submitted that even if the capillary liquid junction of Hofmeier or Ingruber were considered in combination with the teachings of Suzuki, that is, even if the junction in line of micro capillary is applied to Suzuki, the junction as claimed in independent claim 16 as amended would not result. Accordingly, it is submitted that independent claim 16 as amended, as well as the claims which depend therefrom, clearly distinguish over the cited and applied references.

With regard to independent claim 10, it should be noted that independent claim 10 has been amended to recite the inner reference solution as well as details of the plate in combination with the porous polymer membrane. Specifically, claim 10 recites "the plate being formed of a material soluble in the porous polymer solution, wherein the porous polymer membrane is directly fixed to the plate. The porous polymer membrane is formed by the steps of forming a solution containing the porous polymer (we used "a porous polymer solution" in claim 10), and dispensing the solution on a hydrogel on a plate, wherein the plate is soluble in the solution, thereby a porous polymer membrane can be formed with directly fixed to the plate. Therefore, the present invention is advantageous in that no additional adhesion material is required to fix the porous polymer membrane and the porous polymer membrane is easily formed in membrane of functioning as both of a junction and a protection. This feature is supported by the example 8 in the specification. In the prior art, the porous membrane is formed by the steps of cutting a

porous film, and fixing the film to a plate by using holder or something for adhesion. It is not directly fixed to the plate as claimed. Neti discloses polytetrafluoroethylene as a membrane which functions as both of a junction and a protection. Even if the idea of Neti is applied to a planar reference electrode, the resulting membrane may be formed by the steps of cutting and fixing as the prior art.

In addition to the foregoing, claim 10 sets forth the specific in a reference solution of the present invention. This particular reference solution is not at all taught or disclosed by the prior art. Accordingly, it is respectfully submitted that independent claim 10 and the claims which depend therefrom patentably define over the art of record.

An earnest and thorough attempt has been made by the undersigned to resolve the outstanding issues in this case and place same in condition for allowance. If the Examiner has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the Examiner is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

It is submitted that the claims as amended herein patentably define over the art relied on by the Examiner and early allowance of same is courteously solicited.

If any fees are required in connection with this case, it is respectfully requested that they be charged to Deposit Account No. 02-0184.

Respectfully submitted,

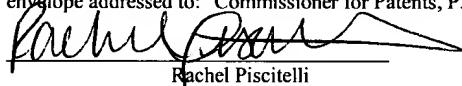
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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on December 3, 2003.



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